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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9104100189 DOC: DATE: 91/04/01 NOTARIZED: NO DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME AUTHOR AFFILIATION
 CONWAY, J. Niagara Mohawk Power Corp.
 MCCORMICK, M.J. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-013-01: on 900905, automatic reactor scram caused by turbine generator trip occurred due to generator field ground. Caused by leakage current through insulating teflon tubes. Work request issued. W/910401 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 9
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
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INTERNAL:	ACNW	2 2	ACRS	2 2
	AEOD/DOA	1 1	AEOD/DSP/TPAB	1 1
	AEOD/ROAB/DSP	2 2	NRR/DET/ECMB 9H	1 1
	NRR/DET/EMEB 7E	1 1	NRR/DLPQ/LHFB11	1 1
	NRR/DLPQ/LPEB10	1 1	NRR/DOEA/OEAB	1 1
	NRR/DREP/PRPB11	2 2	NRR/DST/SELB 8D	1 1
	NRR/DST/SICB 7E	1 1	NRR/DST/SPLB8D1	1 1
	NRR/DST/SRXB 8E	1 1	REG FILE 02	1 1
	RES/DSIR/EIB	1 1	RGN1 FILE 01	1 1
EXTERNAL:	EG&G BRYCE, J.H	3 3	L ST LOBBY WARD	1 1
	NRC PDR	1 1	NSIC MAYS, G	1 1
	NSIC MURPHY, G.A	1 1	NUDOCS FULL TXT	1 1

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NMP 77366

April 1, 1991

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

RE: Docket No. 50-410
LER 90-13 Supplement 1

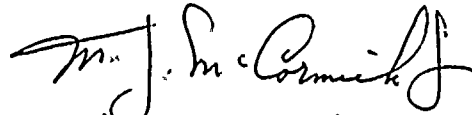
Gentlemen:

In accordance with 10 CFR 50.73, we hereby submit the following
Licensee Event Report:

LER 90-13 Supplement 1 Is being submitted in accordance with 10 CFR 50.73
(a)(2)(iv), "Any event or condition that results in
manual or automatic actuation of any Engineered
Safety Feature (ESF)".

This report was completed in the format designated in NUREG-1022,
Supplement 2, dated September 1985.

Very truly yours,



Martin J. McCormick Jr.
Plant Manager - NMP2

MJM/AC/lmc

ATTACHMENT

xc: Thomas T. Martin, Regional Administrator Region I
William A. Cook, Sr. Resident Inspector



LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 1 0	PAGE (3) 1 OF 0 3
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TITLE (4)
Reactor Scram Caused By Turbine Generator Trip

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																																											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)																																									
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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9)</td> <td style="width:15%;">1</td> <td colspan="10">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)</td> </tr> <tr> <td rowspan="5">POWER LEVEL (10) 0 6 4</td> <td>20.402(b)</td> <td><input checked="" type="checkbox"/></td> <td>50.73(a)(2)(iv)</td> <td><input type="checkbox"/></td> <td>73.71(b)</td> </tr> <tr> <td>20.405(a)(1)(i)</td> <td><input type="checkbox"/></td> <td>50.73(a)(2)(v)</td> <td><input type="checkbox"/></td> <td>73.71(c)</td> </tr> <tr> <td>20.405(a)(1)(ii)</td> <td><input type="checkbox"/></td> <td>50.73(a)(2)(vii)</td> <td><input type="checkbox"/></td> <td rowspan="3">OTHER (Specify in Abstract below and in Text, NRC Form 365A)</td> </tr> <tr> <td>20.405(a)(1)(iii)</td> <td><input type="checkbox"/></td> <td>50.73(a)(2)(viii)(A)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>20.405(a)(1)(iv)</td> <td><input type="checkbox"/></td> <td>50.73(a)(2)(viii)(B)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>20.405(a)(1)(v)</td> <td><input type="checkbox"/></td> <td>50.73(a)(2)(ix)</td> <td><input type="checkbox"/></td> <td></td> </tr> </table>												OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)										POWER LEVEL (10) 0 6 4	20.402(b)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	20.405(a)(1)(i)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)	20.405(a)(1)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 365A)	20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>	20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>	20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>	
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LICENSEE CONTACT FOR THIS LER (12)

NAME John Conway, Manager Technical Support	TELEPHONE NUMBER AREA CODE: 3 1 5 NUMBER: 3 4 9 - 2 6 9 8
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On September 5, 1990, at 0400 hours, with the Reactor Mode Switch in "RUN" and at approximately 64% rated thermal power (645 MWE), Nine Mile Point Unit 2 experienced an Engineered Safety Feature actuation. Specifically, an automatic reactor scram caused by a Turbine Generator trip which was initiated by a Generator field ground.

The root cause investigation determined that the most probable cause of the generator field ground was leakage current through the insulating teflon tubes in the power rectifier cubicles. 1

The immediate corrective action was to respond to the reactor scram and turbine trip in accordance with plant procedures. A Work Request was issued to investigate the Turbine Generator field ground. A plant change request to install a meter to monitor ground leakage current is being evaluated. In the interim, the resistance across the rectifier tube banks will be measured during each forced and planned outage. 1



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Nine Mile Point Unit 2	0 5 0 0 0 4 1 0	9 0	0 1 3	0 1	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. DESCRIPTION OF EVENT

On September 5, 1990, at 0400 hours, with the reactor mode switch in "RUN" and at approximately 64% rated thermal power (645 MWE), Nine Mile Point Unit 2 experienced an Engineered Safety Feature actuation. Specifically, an automatic reactor scram caused by a turbine generator trip, which was initiated by a turbine generator field ground.

There were no inoperable systems which contributed to this event. No plant system or component failure resulted from this event.

II. CAUSE OF EVENT

A root cause evaluation was performed utilizing Nuclear Division Procedure NDP-16.01, "Root Cause Evaluation". This evaluation has determined that the most probable cause of the generator field ground was leakage current through the insulating teflon tubes in the power rectifier cubicles. The teflon tubes have stator water flowing through them during operation. While in service, contaminants accumulate across the teflon tubes and allow leakage current to flow to ground, hence, tripping the generator field ground relay.

III. ANALYSIS OF EVENT

This event is reportable in accordance with 10 CFR 50.73 (a)(2)(iv), "Any event or condition that results in manual or automatic actuation of any Engineered Safety Feature (ESF) including the Reactor Protection System (RPS)".

There were no safety consequences to the plant or public as a result of this event. This event is bounded by the spectrum of events discussed in the Updated Safety Analysis Report in section 15.2.2, "Generator Load Rejection".

IV. CORRECTIVE ACTION

Immediate corrective action was to implement immediate operator actions for scram response per N2-OP-101C, "Plant Shutdown".



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 0 9 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 0	0 1 3	0 1	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

IV. CORRECTIVE ACTION (cont.)

Additional corrective action included:

Issued Work Request (WR# 184457) for troubleshooting the Turbine Generator Field ground, which led to the replacement of the insulating teflon tubes in the power rectifiers for the generator.

A plant change request is being processed to install a meter to monitor the leakage current to ground. Therefore, the cause of the ground fault can be investigated and possibly corrected prior to a generator trip.

As an interim action, a work item will be added to the forced and planned outage work plans to measure the resistance across the rectifier tube banks to determine if the problem is recurring.

1

V. ADDITIONAL INFORMATION

A. Previous similar events:

There have been previous LER's where reactor scrams resulted from Turbine Generator trips; however, none were caused by a Generator Field ground.

B. Identification of components referred to in this LER:

COMPONENT SYSTEM	IEEE-805 SYSTEM	IEEE-803 COMPONENT
Turbine Generator	TB	TG

C. Failed components: none.

